

Docket No: ATOTP0104US**Serial No. 10/606,460****REMARKS**

Upon entry of the present Reply, claims 28-31, 36-42 and 50-72 are pending in the application. Claims 28, 36, 40 and 60 are amended herein. Claims 1-27, 32-35 and 43-49 were cancelled previously.

Claims 53 and 64 have been withdrawn from consideration. Since the generic claims upon which the withdrawn claims depend are allowable for the reasons set forth below, Applicants respectfully request reinstatement of claims 53 and 64 into the application.

The pending claims are amended herein to make clear that the claimed process is an immersion plating process, as Applicants have argued throughout the prosecution of this application. Applicants consider that the presently submitted amendments of claims 28, 36, 40 and 60 do not constitute narrowing amendments because in each case the amendments simply make more explicit what Applicants consider to have been explicit in the claims and the application since it was filed: that the presently disclosed and claimed process is an immersion plating process as that term is well known and fully understood in the art.

For the same reason, as detailed further below, Applicants respectfully request the Examiner to enter the present amendments and to forthwith allow the claims.

For the reasons discussed below, reconsideration of the application and the presently pending claims, and allowance thereof is respectfully requested.

Applicants hereby incorporate herein by reference the points and arguments set forth in Applicants' previous Reply to Office Action, with respect to the claims remaining in the application. For the sake of brevity, the points and arguments are not repeated herein, although Applicants submit they are fully applicable, and that the arguments have not been rebutted by the Examiner's arguments in response.

Examiner Telephonic Interview with Applicants' Attorney

On 28 July, at the request of Applicants' undersigned attorney, a telephone interview was conducted between Examiner Cleveland and Applicants' undersigned

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attorney. Both Applicants and the attorney thank the Examiner for agreeing to the interview and for the helpful comments and discussion of the claim language in the interview. During the interview, Applicants' attorney and the Examiner discussed primarily the claim term "immersion plating" and the meaning of this term both as widely understood throughout the metal finishing arts and as used in Applicants' disclosure and claims. As a result of that discussion, Applicants agreed to and now present the amended claims in the present paper. As noted above, these claims make clear that the present invention is concerned with an immersion plating process and the article plated thereby.

The foregoing constitutes Applicants' summary of the substance of the telephonic interview.

Amendment of Claims and Entry After Final

Applicants respectfully request the Examiner to enter the presently submitted amended claims at this time, and to issue a Notice of Allowance for this application.

Applicants respectfully submit, as discussed in the telephone interview, that since the present status of the application as having been finally rejected is at least partially due to a lack of understanding of the terminology of immersion plating on the part of the Examiner, Applicants should not have to bear the costs of filing an RCE to have the present amendments entered and the case allowed.

Applicants further submit that the presently submitted claims are allowable over the prior art generally, and the art of record in particular.

Immersion Plating Is Neither Inherent in Nor a Species of Electroplating

In the telephone interview, the Examiner stated his views that immersion plating might be inherent in electroplating, based on disclosure in US 3928147 that immersion plating is to be avoided in a copper electroplating bath, or that immersion plating might be a species of electroplating, based on the parenthetical mention of immersion plating with electroplating, in the Abstract of US 4686017. Both of these views are incorrect.

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First, it must be understood that the term "electrolytic plating" actually is a general term applicable to any kind of plating that involves the transfer of electrons as part of the plating process. Thus, electrolytic plating is distinguished from, e.g., mechanical plating, in which metals are applied to a substrate by the application of a mechanical force. In electrolytic plating, a transfer of electrons causes a metal ion in the plating bath to be reduced from its ionic state (M^{+n}) to the free metal state (M^0) which becomes deposited on the substrate. In electroplating, this transfer of electrons results from the applied (or impressed) electric current. In electroless plating, this transfer of electrons results from the oxidation of a reducing agent in the plating bath. In immersion plating, this transfer of electrons results from the oxidation of metal on the surface of the substrate that is being plated due to a natural difference in electrolytic potential between the two metals. Thus, the difference between these types of electrolytic plating is really a matter of different chemistries being used and the type of deposit that is desired.

This understanding of the term "electrolytic plating" is reflected in US 4686017, in which, at col. 1, line 12-16, the following statement is made:

Electrolytic plating, including impressed current and sacrificial (immersion) plating, is used to produce decorative coatings

Thus, Applicants submit that the parenthetical in the Abstract of US 4696017 does not mean or imply that immersion plating is a subset or species of electroplating. Rather, the parenthetical refers to the antecedent "variety of methods", and is merely another example of such "variety of methods", together with electroplating. While this sentence appears grammatically unclear, any person of skill in the art would understand that the antecedent for the parenthetical is "variety of methods" and not "electroplating".

Thus, immersion plating is not a species or subset of electroplating. It is a species or subset of the more general "electrolytic" plating and is recognized in the art as fully distinct from electroplating. This distinction is supported by the Examiner's own

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example of the classification manual, in which subclass 80 is entitled ELECTROLYTIC COATING.

Regarding the Examiner's suggestion that immersion plating might be an inherent property of electroplating baths, this is erroneous for similar reasons. The teachings of US 3928147 recognize that under some conditions, i.e., with some chemistries, copper is capable of immersion plating on zinc, and that this is to be avoided. See, for example, col. 1, lines 22-26, which teaches that chemical deposition, i.e., immersion plating, of copper on zinc is to be avoided because the deposited copper film has poor adhesion and uniformity. US 3928147 goes on to teach that by adjusting the chemistry, the desired electroplating can be obtained.

US 3928147 also indicates in the table at col. 2 that zinc is capable of immersion plating on aluminum. However, this is not Applicants' claimed invention, which includes a number of other features. The fact that the same metals can be applied by both electroplating and immersion plating does not equate the two nor does it mean that one is inherent in the other. (In this regard, the Examiner is respectfully reminded that "Inherent anticipation requires that the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art." *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002) (quoting *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)).

Finally, Applicants note that in the Advisory Action, the Examiner stated that Applicants argument with respect to the claims being limited to an immersion plating process were unconvincing because the claims did not positively recite immersion plating. The claims now positively recite immersion plating.

For all of the foregoing reasons, Applicants respectfully request the Examiner to enter the present Reply and amendments and to allow the claims.

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Based on the foregoing, Applicants respectfully submit that the presently disclosed and claimed invention patentably distinguishes over Eckles and Suzuki et al. and the assorted combinations of these references with the various tertiary references. Applicants also request that claims 53 and 64 be reinstated to the application, since the generic claims are allowable.

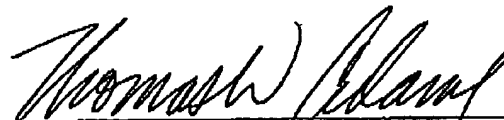
If any issues remain, or if the Examiner considers that a telephone interview would be helpful to facilitate favorable prosecution of this application, the Examiner is invited to telephone the undersigned attorney.

It is believed no additional fee is required for this filing. However, if any fee is required, please charge the fee to Deposit Account No. 18-0988, Order No. ATOTP0104US.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

DATE: July 29, 2005


Thomas W. Adams, Reg. No. 35,047

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
Ph: (216) 621-1113
Fax: (216) 621-6165

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